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| 10/661,722 | 09/12/2003 | John M. Koegler III | 200315232-1 | 8307 |

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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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2627

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--|---------------------------------------|--|
| Office Action Summary | Application No. 10/661,722 | Applicant(s) KOEGLER ET AL. | |
| | Examiner Christopher R. Lamb | Art Unit 2627 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1, 4, 5, 8-13, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda (US 2002/0191517; cited in previous action) in view of Satoh et al. (US 5,119,363; cited in previous action).

Regarding claim 1:

Honda discloses:

An optical disk drive (Fig. 6), comprising:

a spindle motor to turn an optical disk (45);

an OPU to apply an image to a coating within a label region of the optical disk

(66).

Honda does not disclose "an encoder, configured to track a plurality of substantially identical disk speed features on the optical disk in a region distinct from the label region and to thereby obtain disk speed data, the disk speed data ascertainable without tracking any other features on the optical disk."

Satoh discloses:

An encoder, configured to track a plurality of substantially identical disk speed features on the optical disk in a distinct region (Fig. 8: 20) and to thereby obtain disk speed data, the disk speed data ascertainable without tracking any other features on the optical disk (column 6, line 55 to column 7, line 5).

It would have been obvious to one of ordinary skill in the art to include in Honda an encoder, configured to track a plurality of substantially identical disk speed features on the optical disk in a region distinct from the label region and to thereby obtain disk speed data, the disk speed data ascertainable without tracking any other features on the optical disk, as taught by Satoh.

The motivation would have been to accurately synchronize the writing address on the disk with the recording signal (Satoh, column 11, lines 15-25).

Regarding claim 4:

The method of Honda in view of Satoh additionally comprises a control procedure to coordinate disk speed data from the encoder with the OPU during application of the image (Honda: paragraphs 37,47).

Regarding claim 5:

Honda discloses a host computer (Fig. 6: 46), and thus includes a processor-readable medium comprising processor-executable instructions for labeling an optical disk. Satoh discloses wherein each of the disk speed features are spaced apart substantially equally in an annular ring on the optical disk (Fig. 8). All other elements of this claim have already been addressed with regards to earlier rejections.

Regarding claim 8:

Honda in view of Satoh discloses processing the disk speed data to determine times when the speed of the spindle motor should be increased and times when the speed of the spindle motor should be decreased to maintain desired speed (Honda, paragraph 37: the spindle motor is controlled to maintain a constant speed).

Regarding claim 9:

Honda in view of Satoh discloses distinguishing between a first and a second signal received from the encoder, wherein the first and second signals result from differences in light reflection corresponding to the presence or absence of the disk speed features (Satoh column 5, lines 15-25).

Regarding claim 10:

Honda in view of Satoh discloses distinguishing between a first and a second signal received from the encoder, wherein the first signal results when light is reflected off a mirrored surface and the second signal results when light is reflected by a saw tooth feature (Satoh column 5, lines 15-25 discusses the difference in reflectivity; Satoh Fig. 9A, column 6, lines 25-35 show an arrangement of grooves that together form a "saw tooth feature.").

Regarding claim 11:

In Honda in view of Satoh the interpreting comprises instructions for distinguishing between a first and a second signal received from the encoder, wherein the first signal results when light is reflected off a mirrored surface and wherein the second signal results when light is reflected by a molded pit (Satoh column 5, lines 15-25: that the specific embodiment relied upon has molded pits is shown in Fig. 9B).

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Regarding claim 12:

In Honda in view of Satoh the interpreting comprises instructions for distinguishing between the output signals, wherein the output signals are associated with levels of light reflectivity within a region defined on a mirror surface adjacent to the coating on the label side of the disk (Satoh column 5, lines 15-25).

Regarding claims 13, and 16-20:

All elements positively recited have already been discussed with regards to the earlier rejections. No further elaboration is necessary.

Regarding claim 15:

All elements have already been discussed except wherein the molded disk angular orientation features are located radially "inside an area on the optical disk reachable by an OPU." This feature is inherent to Honda in view of Satoh, as the encoder is in itself an OPU.

3. Claims 21, 2, 22, 7, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Satoh.

Regarding claim 21:

Honda in view of Satoh discloses an optical disk drive as discussed above.

Honda in view of Satoh does not disclose that the disk drive is further configured to track disk angular orientation features on the optical disk so as to thereby obtain angular orientation data, the disk angular orientation features different from the disk speed features.

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Satoh discloses a disk drive further configured to track disk angular orientation features on the optical disk (Fig. 8: M1-M8) so as to thereby obtain angular orientation data (column 7, lines 5-25: Satoh refers to this as sector data but each sector is a particular angular region of the disk as shown in Fig. 8), the disk angular orientation features different from the disk speed features (column 6, lines 1-25).

It would have been obvious to modify Honda in view of Satoh further in view of Satoh to include wherein the disk drive is further configured to track disk angular orientation features on the optical disk so as to thereby obtain angular orientation data, the disk angular orientation features different from the disk speed features.

The motivation would have been to readily and stably detect the angular orientation (Satoh column 11, lines 25-30).

Regarding claim 2:

In Honda in view of Satoh the disk angular orientation features are molded within the region distinct from the label region (Satoh shows them in a distinct region in Fig. 8: in Honda this would necessarily be a region distinct from the label region).

Regarding claims 22 and 7:

All elements positively recited have been discussed with regards to earlier rejections; no further elaboration is necessary.

Regarding claim 23:

Honda in view of Satoh discloses a processor-readable medium as discussed above.

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Honda in view of Satoh does not disclose wherein "the disk speed features are disposed on the optical disk in a first annular ring and the disk angular orientation features are disposed on the optical disk in a second, different annular ring."

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have the features in two annular rings instead of one because the Applicant has not disclosed that having two rings provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a single annular ring.

Applicant admits this in paragraph 28, lines 9-10, of the specification: "the disk speed features and disk angular orientation features may be combined into an annular ring of features."

Therefore, it would have been an obvious matter of design choice to modify Honda in view of Satoh to obtain the invention as specified in claim 23.

4. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Satoh as applied to claims 21 and 22 above, and further in view of Monen (US 5,452,285).

Regarding claim 3:

Honda in view of Satoh discloses an optical disk drive as described above.

Honda in view of Satoh does not disclose "wherein the OPU is additionally configured to track the disk angular orientation features, the disk angular orientation

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features defined within the label region.” (Instead, Honda in view of Satoh tracks these features via the encoder).

Monen discloses wherein the OPU is additionally configured to track the disk angular orientation features (in Monen, the disk angular orientation features – or sector information – is recorded in bands on the disk, as in Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Honda in view of Satoh wherein the OPU is additionally configured to track the disk angular orientation features, the disk angular orientation features defined within the label region, as taught by Monen.

The motivation would have been to reliably establish timing, address, and tracking functions, as disclosed by Monen (column 2, lines 15-20).

Regarding claim 6:

It is similar to claim 3 and is similarly rejected.

Response to Arguments

5. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

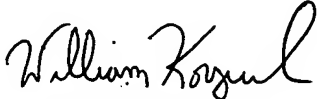
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (572) 272-5264. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 10/5/06


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